# CURRICULUM VITAE

## Personal Details

Name	Naser Khaji	
Date of Birth	1971	
Place of Birth	Tehran, Iran	100
Marital Status	Married	
Designation	Professor	
Department	Department of Earthquake Engineering	
Faculty	Faculty of Civil and Environmental Engineering	N.
Address (Office)	Tarbiat Modares University (TMU), P.O. Box 14115- 397, Tehran, Iran	
Telephone Number	+98-21-82883319	
Fax Number	+98-21-82884914	
E-mail Address	nkhaji@modares.ac.ir	
Webpage	http://www.modares.ac.ir/?&fkeyid=&siteid=95&pageid=7319	

## Academic Degrees

1998-2001	Ph.D., Civil Engineering, University of Tokyo, Japan
1995-1998	M.Sc., Civil Engineering, Tarbiat Modares University, Iran
1990-1995	B.Sc., Civil Engineering, University of Tehran, Iran

# **Employment History**

2013-Present	Professor,	Faculty	of Civil	and	Environmer	ntal Engineerin	g, Tarbiat	Modares
	University,	Tehran,	Iran					
0000 0010	Assasiate	Duefeeee	- Faaul	<b>.</b>				Taulalat

- 2009-2013 Associate Professor, Faculty of Civil and Environmental Engineering, Tarbiat Modares University, Tehran, Iran
- 2002-2009 Assistant Professor, Faculty of Civil and Environmental Engineering, Tarbiat Modares University, Tehran, Iran

## Academic Leadership and Services

- 2017-Present Dean of faculty of civil and environmental engineering
- 2017-Present Member of council of the university
- 2017-Present Representative of Iranian ministry of science, research and technology in national committee of seismometer and accelerometer networks
- 2009-Present Member of international affairs council of the university
- 2017 Ranking reviewer of two national scientific-research journals for Iranian ministry of science, research and technology
- 2009-2017 Director of international scientific collaborations of the university
- 2009-2013 Head of department of earthquake engineering
- 2014-Present Reviewer for promotion of academic staff in several universities of Iran
- 2013-Present Reviewer and reader of various post-doctoral proposals, research plans, authored books for several universities of Iran
- 2010-Present Representative of the university in the board of trustees of national and international congresses in civil engineering
- 2015 Member of scientific committee of 7th international conference on seismology and earthquake engineering

# 2006 Member of executive committee of 7th international congress on civil engineering

2002-2003 Director of computer center of department of civil engineering

## Professional Membership

- Japanese society of civil engineers (JSCE), Japan
- Iranian association of earthquake engineering (IAEE), Iran
- Iranian association of bridge engineering (IABE), Iran

## Research Interests

- Computational structural dynamics and seismic wave propagation
- Inverse problems in structural dynamics and earthquake engineering
- Numerical methods in computational mechanics (finite element method, boundary element method, discrete element method)
- Health monitoring of structures
- Soil-structure-fluid interaction
- Seismic hazard analysis

## Selected Publications

#### Authored books

- 1. Khaji, N. 2013. Principles of Engineering Seismology and Seismic Hazard Analysis. Tarbiat Modares University Press, Tehran, Iran (*in Persian*). ISBN: 978-600-5394-82-5
- Khaji, N. 2017. Principles of Engineering Seismology and Seismic Hazard Analysis. Tarbiat Modares University Press, Tehran, Iran (*in Persian*). ISBN: 978-600-5394-82-5 (2<sup>nd</sup> Edition)

#### Refereed international journal papers

- 1. Khaji N, Ahmadi MT, 2002. An efficient method for dam-reservoir seismic interaction analysis. Engineering Journal of Amirkabir, 13(50), 86–94. (SCOPUS indexed)
- Mehrjoo M, Khaji N, Moharrami H, Bahreininejad A, 2008. Damage detection of truss bridge joints using artificial neural networks. Expert Systems with Applications, 35(3), 1122–1131. (ISI & SCOPUS indexed)
- Shekari MR, Khaji N, Ahmadi MT, 2009. A coupled BE–FE study for evaluation of seismically isolated cylindrical liquid storage tanks considering fluid–structure interaction. Journal of Fluids and Structures, 25(3), 567–585. (ISI & SCOPUS indexed)
- Gharighoran A, Daneshjoo F, Khaji N, 2009. Use of Ritz method for damage detection of reinforced and post-tensioned concrete beams. Construction and Building Materials, 23(6), 2167–2176. (ISI & SCOPUS indexed)
- 5. Khaji N, Habibi M, Mirhashemian P, 2009. Modeling transient elastodynamic problems using spectral element method. Asian Journal of Civil Engineering, 10(4), 361–380. (SCOPUS indexed)
- Khaji N, Shafiei M, Jalalpour M, 2009. Closed-form solutions for crack detection problem of Timoshenko beams with various boundary conditions. International Journal of Mechanical Sciences, 51(9-10), 667–681. (ISI & SCOPUS indexed)
- 7. Shekari MR, Khaji N, Ahmadi MT, 2010. On the seismic behavior of cylindrical base-isolated liquid storage tanks excited by long-period ground motions. Soil Dynamics and Earthquake Engineering, 30(10), 968–980. (ISI & SCOPUS indexed)

- 8. Hamzeh Javaran S, Khaji N, Moharrami, H, 2011. A dual reciprocity BEM approach using new Fourier radial basis functions applied to 2D elastodynamic transient analysis. Engineering Analysis with Boundary Elements, 35(1), 85–95. (ISI & SCOPUS indexed)
- 9. Karimi I, Khaji N, Ahmadi MT, Mirzayee M, 2011. System identification of concrete gravity dams using artificial neural networks based on a hybrid FE-BE approach. Engineering Structures, 32(11), 3583–3591. (ISI & SCOPUS indexed)
- Khanmirza E, Khaji N, Johari Majd, 2011. Model updating of multistory shear buildings for simultaneous identification of mass, stiffness and damping matrices using two different softcomputing methods. Expert Systems with Applications, 38(5), 5320–5329. (ISI & SCOPUS indexed)
- Khaji N, Khodakarami MI, 2011. A new semi-analytical method with diagonal coefficient matrices for potential problems. Engineering Analysis with Boundary Elements, 35(6), 845– 854. (ISI & SCOPUS indexed)
- 12. Hamzeh Javaran S, Khaji N, Noorzad, A, 2011. First kind Bessel function (J-Bessel) as radial basis function for plane dynamic analysis using dual reciprocity boundary element method. Acta Mechanica, 218(3–4), 247–258. (ISI & SCOPUS indexed)
- Shafiee M, Khaji N, 2011. Analytical solutions for free and forced vibrations of a multiple cracked Timoshenko beam subject to a concentrated moving load. Acta Mechanica, 221(1– 2), 79–97. (ISI & SCOPUS indexed)
- 14. Mirzayee M, Khaji N, Ahmadi MT, 2011. A hybrid distinct element–boundary element approach for seismic analysis of cracked concrete gravity dam–reservoir systems. Soil Dynamics and Earthquake Engineering, 31(10), 1347–1356. (ISI & SCOPUS indexed)
- Khodakarami MI, Khaji N, 2011. Analysis of elastostatic problems using a semi-analytical method with diagonal coefficient matrices. Engineering Analysis with Boundary Elements, 35(12), 1288–1296. (ISI & SCOPUS indexed)
- Dehghani E, Daneshjoo F, Aghakouchak AA, Khaji N, 2012. A new bond-slip model for adhesive in CFRP-steel composite systems. Engineering Structures, 34(1), 447–454. (ISI & SCOPUS indexed)
- Soghrat MR, Khaji N, Zafarani H, 2012. Simulation of strong ground motion in northern Iran using the specific barrier model. Geophysical Journal International, 188(2), 645–679. (ISI & SCOPUS indexed)
- Khodakarami MI, Khaji N, Ahmadi MT, 2012. Modeling transient elastodynamic problems using a novel semi-analytical method yielding decoupled partial differential equations. Computer Methods in Applied Mechanics and Engineering, 213(1), 183–195. (ISI & SCOPUS indexed)
- Khaji N, Kazemi Noureini H, 2012. Detection of a through-thickness crack based on elastic wave scattering in plates, Part I: Forward Solution. Asian Journal of Civil Engineering, 13(3), 301–318. (SCOPUS indexed)
- Kazemi Noureini H, Khaji N, 2012. Detection of a through-thickness crack based on elastic wave scattering in plates, Part II: Inverse Solution. Asian Journal of Civil Engineering, 13(4), 433–454. (SCOPUS indexed)
- 21. Khaji N, Khodakarami MI, 2012. A semi-analytical method with a system of decoupled ordinary differential equations for three-dimensional elastostatic problems. International Journal of Solids and Structures, 49(18), 2528–2546. (ISI & SCOPUS indexed)
- 22. Mehrjoo M, Khaji N, Ghafory-Ashtiany M, 2013. Application of genetic algorithm in crack detection of beam-like structures using a new cracked Euler–Bernoulli beam element. Applied Soft Computing, 13(2), 867–880. (ISI & SCOPUS indexed)
- 23. Khaji N, Hamzehei Javaran S, 2013. New complex Fourier shape functions for the analysis of two-dimensional potential problems using boundary element method. Engineering Analysis with Boundary Elements, 37(2), 260–272. (ISI & SCOPUS indexed)
- 24. Khaji N, Mirzajani M, 2013. Frequency domain analysis of elastic bounded domains using a new semi-analytical method. Acta Mechanica, 224(7), 1555–1570. (ISI & SCOPUS indexed)

- 25. Peimani M, Yazdanpanah MJ, Khaji N, 2013. Parameter estimation in hysteretic systems based on adaptive least-squares. Journal of Information Systems and Telecommunication, 1(4), 217-221. (SCOPUS indexed)
- Dehghan Manshadi SH, Khaji N, Rahimian M, 2014. Cavity/inclusion detection in plane linear elastic bodies using linear sampling method. Journal of Nondestructive Evaluation, 33(1), 93–103. (ISI & SCOPUS indexed)
- Khaji N, Mehrjoo M, 2014. Crack detection in a beam with an arbitrary number of transverse cracks using genetic algorithms. Journal of Mechanical Science and Technology, 28(3), 823–836. (ISI & SCOPUS indexed)
- 28. Mehrjoo M, Khaji N, Ghafory-Ashtiany M, 2014. New Timoshenko-cracked beam element and crack detection in beam-like structures using genetic algorithm. Inverse Problems in Science and Engineering, 22(3), 359–382. (ISI & SCOPUS indexed)
- 29. Shafiei M, Khaji N, 2014. Simulation of two-dimensional elastodynamic problems using a new adaptive physics-based method. Meccanica, 49(6), 1353–1366. (ISI & SCOPUS indexed)
- Hamzehei Javaran S, Khaji N, 2014. Dynamic analysis of plane elasticity with new complex Fourier radial basis functions in the dual reciprocity boundary element method. Applied Mathematical Modelling, 38(14), 3641–3651. (ISI & SCOPUS indexed)
- 31. Dehghan Manshadi SH, Khaji N, 2014. Cavity detection in a heat conductor using linear sampling method. Heat and Mass Transfer, 50(7), 973–984. (ISI & SCOPUS indexed)
- 32. Najafizadeh J, Kamalian M, Jafari MK, Khaji N, 2014. Seismic analysis of rectangular alluvial valleys subjected to incident SV waves by using the spectral finite element method. International Journal of Civil Engineering, 12(3), 439–451. (ISI & SCOPUS indexed)
- Khodakarami MI, Khaji N, 2014. Wave propagation in semi-infinite media with topographical irregularities using Decoupled Equations Method. Soil Dynamics and Earthquake Engineering, 65(1), 102–112. (ISI & SCOPUS indexed)
- Ahmadi HR, Daneshjoo F, Khaji N, 2015. New damage indices and algorithm based on square time–frequency distribution for damage detection in concrete piers of railroad bridges. Structural Control and Health Monitoring, 22(1), 91–106. (ISI & SCOPUS indexed)
- 35. Khanmirza E, Khaji N, Khanmirza E, 2015. Identification of linear and non-linear physical parameters of multistory shear buildings using artificial neural network. Inverse Problems in Science and Engineering, 23(4), 670–687. (ISI & SCOPUS indexed)
- 36. Khaji N, Dehghan Manshadi SH, 2015. Time domain linear sampling method for qualitative identification of buried cavities from elastodynamic over-determined boundary data. Computers and Structures, 153, 36–48. (ISI & SCOPUS indexed)
- Moghadaszadeh SO, Khaji N, 2015. Development and application of a semi-analytical method with diagonal coefficient matrices for analysis of wave diffraction around vertical cylinders of arbitrary cross-sections. Ocean Engineering, 110, 292–302. (ISI & SCOPUS indexed)
- Mirzajani M, Khaji N, Khodakarami MI, 2016. A new global nonreflecting boundary condition with diagonal coefficient matrices for analysis of unbounded media. Applied Mathematical Modelling, 40(4), 2845–2874. (ISI & SCOPUS indexed)
- Khaji N, Yazdani M, 2016. Determination of stress intensity factors of 2D fracture mechanics problems through a new semi-analytical method. Fatigue & Fracture of Engineering Materials & Structures, 39(4), 467–478. (ISI & SCOPUS indexed)
- Zakian P, Khaji N, 2016. A novel stochastic-spectral finite element method for analysis of elastodynamic problems in the time domain. Meccanica, 51(4), 893–920. (ISI & SCOPUS indexed)
- Peimani M, Yazdanpanah MJ, Khaji N, 2016. Adaptive dynamic surface control of Bouc–Wen hysteretic systems. Journal of Dynamic Systems, Measurement, and Control (ASME), 138(9), 091007. (ISI & SCOPUS indexed)

- Zakian P, Khaji N, 2016. Spectral finite element simulation of seismic wave propagation and fault dislocation in elastic media. Asian Journal of Civil Engineering, 17(8), 1189–1213. (SCOPUS indexed)
- Yazdani M, Khaji N, Khodakarami MI, 2016. Development of a new semi-analytical method in fracture mechanics problems based on energy release rate. Acta Mechanica, 227(12), 3529–3547. (ISI & SCOPUS indexed)
- 44. Zakian P, Khaji N, Kaveh A, 2017. Graph theoretical methods for efficient stochastic finite element analysis of regular structures. Computers and Structures, 178, 29–46. (ISI & SCOPUS indexed)
- 45. Fekrazadeh S, Khaji N, 2017. An analytical method for crack detection of Timoshenko beams with multiple open cracks using a test mass. European Journal of Environmental and Civil Engineering, 21(1), 24–41. (ISI & SCOPUS indexed)
- Zakian P, Khaji N, Soltani M, 2017. A Monte Carlo adapted finite element method for dislocation simulation of faults with uncertain geometry. Journal of Earth System Science, 126(7), 1–22. (ISI & SCOPUS indexed)
- 47. Khaji N, Zakian P, 2017. Uncertainty analysis of elastostatic problems incorporating a new hybrid stochastic-spectral finite element method. Mechanics of Advanced Materials and Structures, 24(12), 1030–1042. (ISI & SCOPUS indexed)
- Livani MA, Khaji N, Zakian P, 2018. Identification of multiple flaws in 2D structures using dynamic extended spectral finite element method with a universally enhanced metaheuristic optimizer. Structural and Multidisciplinary Optimization, 57(2), 605–623. (ISI & SCOPUS indexed)
- 49. Yazdani M, Khaji N, 2018. Development of a new semi-analytical approach for 2D analysis of crack propagation problems. Fatigue & Fracture of Engineering Materials & Structures (Accepted for publication). (ISI & SCOPUS indexed)

#### Selected refereed conference proceedings

- 1. Khaji N, 2003. On the location determining of coming Tokai earthquake, Central Japan. 4th International Conference of Seismology and Earthquake Engineering, SEE4, Tehran, Iran.
- Khaji N, Mehrjoo M, 2007. Damage Detection of Bridge Structures from Dynamic Responses Using Neural Networks. 5th International Conference of Seismology and Earthquake Engineering, SEE5, Tehran, Iran.
- Karimi I, Khaji N, 2009, System identification of concrete gravity dams using artificial neural networks. 2nd International Conference of Long Term Behavior of Dams, LTDB09, Graz, Austria.
- Khodakarami MI, Khaji N, 2010. Application of higher-order elements in scaled boundary finite element method (SBFEM) to improve its accuracy and efficiency. 5th National Congress on Civil Engineering, Mashhad, Iran.
- 5. Kazemi Noureini H, Khaji N, 2011. Application of spectral finite element method in analysis of transient elastodynamic problems. 6th National Congress on Civil Engineering, Semnan, Iran.
- 6. Mehrjoo M, Khaji N, 2011. Stiffness matrix of a new cracked beam finite element using the conjugated beam method and Betti's law. 6th International Conference on Seismology and Earthquake Engineering, SEE6, Tehran, Iran.
- 7. Hamidi M, Khaji N, 2011. Accurate boundary conditions for finite element modeling of movement field within Iran tectonic plate. 6th International Conference on Seismology and Earthquake Engineering, SEE6, Tehran, Iran.
- 8. Khodakarami MI, Khaji N, 2011. A novel semi-analytical method with diagonal coefficient matrices for the analysis of elastostatic problems. International Conference on Boundary Element and Meshless Techniques XII, BETEQ2011, Brasilia, Brazil.
- 9. Shafiei M, Khaji N, 2012. An adaptive physics-based method for solution of wave motion problem in one dimension. 9th International Congress on Civil Engineering, Isfahan, Iran.

- 10. Fekrazadeh S, Khaji N, 2012. Boundary conditions identification of beam-like structural elements using a test mass. 9th International Congress on Civil Engineering, Isfahan, Iran.
- 11. Khodakarami MI, Khaji N, 2012. A novel three-dimensional semi-analytical method with diagonal coefficient matrices for potential problems. 9th International Congress on Civil Engineering, Isfahan, Iran.
- 12. Khodakarami MI, Khaji N, 2012. Site response analysis of wave propagation in half-planes with topography irregularities based on a novel semi-analytical simulation approach. 15th World Conference of Earthquake Engineering, 15WCEE, Lisbon, Portugal.
- 13. S.H. Dehghan Manshadi, N. Khaji, 2012. A linear sampling method for inverse scattering elastodynamics problems in the time domain. 15th World Conference of Earthquake Engineering, 15WCEE, Lisbon, Portugal.
- 14. M. Shafiei, N. Khaji, 2012. An adaptive physics-based method for the solution of wave motion problem in two dimensions. 15th World Conference of Earthquake Engineering, 15WCEE, Lisbon, Portugal.
- 15. S. Hamzehei Javaran, N. Khaji, 2012. Inverse Multiquadric (IMQ) function as radial basis function for plane dynamic analysis using dual reciprocity boundary element method. 15th World Conference of Earthquake Engineering, 15WCEE, Lisbon, Portugal.
- Yazdani M, Khaji N, 2015. Development of decoupled equations method to calculate stress intensity factors in 2D problems. 10th International Congress on Civil Engineering, Tabriz, Iran.
- 17. Maddahi N, Khaji N, 2015. Vibration based damage identification of masonry structures. 10th International Congress on Civil Engineering, Tabriz, Iran.
- Zakian P, Khaji N, 2015. A stochastic-spectral finite element applied to the analysis of stochastic structural mechanics problems. 10th International Congress on Civil Engineering, Tabriz, Iran.
- 19. Zakian P, Khaji N, 2015. A stochastic-spectral finite element method for analysis of elastodynamic problems. 7th International Conference on Seismology and Earthquake Engineering, SEE7, Tehran, Iran.
- 20. Mirzajani M, Khaji N, 2016. A new nonreflecting open boundary condition for circular cavities in unbounded domain. Proceedings of the 9th National Congress on Civil Engineering, Mashhad, Iran.
- 21. Zakian P, Khaji N, 2017. A new approach for stochastic analysis of cyclically symmetric structures. Proceedings of the 3rd International Conference on Structural Engineering (IRAST2017), Tehran, Iran.

## Teaching Experience

- Finite element method (M.Sc. Level)
- Advanced engineering mathematics (M.Sc. Level)
- Seismic hazard analysis (M.Sc. Level)
- Seismic analysis of special structures (M.Sc. Level): dynamic analysis of storage tanks, bridges, tunnels, pipelines, telecommunication towers, and so forth.
- Boundary element method (Ph.D. Level)
- Nonlinear finite element method (Ph.D. Level)
- Elastic wave propagation (Ph.D. Level)

## Theses and Dissertations Supervision

Supervising and advising 48 M.Sc. theses and 13 Ph.D. dissertations in the aforementioned research interests, some of which are given in the followings:

## 2006

• Mehrjoo M. Structural health monitoring of truss bridges using artificial neural networks.

#### 2007

- Shekari MR. Dynamic analysis of seismically isolated cylindrical liquid storage tanks considering fluid-structure interaction.
- Mirzayee M. Seismic analysis of cracked concrete gravity dam using a hybrid distinct element–boundary element approach.

#### 2008

- Khanmirza E. Model updating of multistory shear buildings for simultaneous identification of physical parameters using artificial neural networks.
- Mirhashemian P. Dynamic analysis of soil-structure interaction problems using a hybrid finite element–spectral element approach.

#### 2009

- Karimi I. System identification of dynamic characteristics for concrete gravity dams using artificial neural networks.
- Hamzeh Javaran S. New orthogonal higher-order basis functions for boundary element method applied to elastodynamic transient analyses.
- Shafiee M. Analytical solutions for free and forced vibrations of a cracked Timoshenko beam subject to a concentrated moving load.

#### 2010

- Soghrat MR. Simulation of strong ground motion in northern Iran using the specific barrier model.
- Kazemi Noureini H. Detection of a through-thickness crack in plates using spectral finite element method.

#### 2011

• Fekrazadeh S. An analytical method for crack detection of Timoshenko beams using a test mass.

## 2012

• Mirzajani M. A new semi-analytical method for analysis of dynamic soil-structure interaction problems.

#### 2013

• Moghadaszadeh SO. Development and application of a modified scaled boundary finite element method for analysis of wave diffraction around vertical cylinders.

#### 2015

• Livani MA. Identification of cracks in 2D structures using dynamic extended spectral finite element method and genetic algorithm.

#### Selected Ph.D. dissertations supervision

#### 2007

• Gharighoran A. Damage detection of bridges deck using variation of dynamic characteristics (Advisor).

#### 2011

• Khodakarami MI. Modeling transient elastodynamic problems using a novel semianalytical method with diagonal characteristics matrices (Supervisor).

#### 2012

 Ahmadi HR. Damage detection in concrete piers of railroad bridges based on time– frequency distribution analyses (Advisor).

## 2013

- Hamzehei Javaran. New basis functions of infinite continuity for analysis of continuum mechanics problems using boundary element method (Supervisor).
- Mehrjoo M. Application of expert systems in damage detection of steel bridge's girders (Supervisor).

## 2014

- Dehghan Manshadi SH. Development of linear sampling method for the solution of inverse problems of elastic wave scattering (Supervisor).
- Najafizadeh J. Seismic analysis of alluvial valleys using the spectral finite element method (Advisor).

#### 2015

• Shafiei M. Development of cellular automata for adaptive solution of one- and twodimensional elastodynamic problems (Supervisor).

#### 2016

- Yazdani M. Development of decoupled equations method for analysis of crack problems based on linear elastic fracture mechanics (Supervisor).
- Zakian P. A novel stochastic-spectral finite element method for analysis of seismic wave propagation problems due to faulting (Supervisor).
- Peimani M. Modeling, control and condition monitoring of hysteretic structural systems (Advisor).

## Advisory (Reviewer) Board of International Journals

- International Journal of Mechanical Sciences (Elsevier)
- International Journal of Solids and Structures (Elsevier)
- Engineering Structures (Elsevier)
- Journal of Engineering Mechanics (ASCE)
- Engineering Analysis with Boundary Elements (Elsevier)
- Fatigue & Fracture of Engineering Materials & Structures (Wiley)
- Acta Mechanica Sinica (Springer)
- Structural Engineering and Mechanics (Techno-Press)
- International Journal of Computational Methods (Institute of Mechanics, Chinese Academy of Sciences)
- Ain Shams Engineering Journal (Elsevier)
- Journal of Earthquake Engineering (Taylor & Francis)
- Journal of Seismology and Earthquake Engineering (IIEES)
- International Journal of Civil Engineering (IUST)
- Journal of Computational Methods in Engineering (IUT)
- Scientia Iranica (SUT)
- Civil Engineering Infrastructures Journal (UT)

## Member of Editorial Boards

- Editor of Bulletin of Earthquake Science and Engineering (IIEES) (<u>http://www.jseeonline.com/index.php/jsee</u>)
- Editor of Journal of Seismology and Earthquake Engineering (IIEES)
- Editorial Advisory Board of Modares Civil Engineering Journal (TMU)

# **Research Projects**

- Khaji, N. 2008. Seismic analysis of cracked concrete gravity dams using a hybrid distinct element–boundary element approach. Water Resources Management Organization, Iranian Ministry of Energy (Project number: DAM2-85126).
- Zakian P, Khaji N. 2017. Numerical simulation of seismic wave propagation due to faulting in a random domain. Iran National Science Foundation (Project number: 96.S.53925).

## Academic Awards

1995	Graduated ranking the second from University of Tehran.
1998	Graduated ranking the first from Tarbiat Modares University.
1995-1998	Post-graduate scholarship for M.Sc. studies awarded by Iranian ministry of science, research and technology.
1998-2001	Full scholarship for Ph.D. studies awarded by Japanese ministry of education, science, sports and culture.
2013	Distinguished professor at Tarbiat Modares University.
2017	Distinguished researcher at Tarbiat Modares University.
2018	Current citations in SCOPUS: 509; Hirsch number (h-index): 12